REMARKS

Claims 1, 3-14 and 16-20 are active in this application. Claims 19 and 20 are withdrawn from consideration as being drawn to non-elected subject matter.

Applicants respectfully request reconsideration of the application, as amended, in view of the following remarks.

The present invention as set forth in **Claim 1** relates to an external additive for a toner for electrophotography comprising:

oxide fine particles which contain silicon, wherein the oxide fine particles have a primary particle diameter of **<u>50 nm to 170 nm</u>** in number average, **a standard deviation σ of a particle size distribution of the primary particle diameter satisfies a relation of: $R/4 \leq \sigma \leq R$,** in which the R expresses the primary particle diameter, the oxide fine particles are substantially spherical having a circularity SF1 of 100 to 130 and a circularity SF2 of 100 to 125, the circularity SF1 is defined as an equation (1) and the circularity SF2 is defined as an equation (2);

$SF1=(L^2/A) \times (\pi/4) \times 100$ equation (1)

$SF2=(P^2/A) \times (1/4\pi) \times 100$ equation (2)

wherein "L" expresses the absolute maximum length of the oxide fine particles; "A" expresses a projected area of the oxide fine particles; and "P" expresses a maximum perimeter of the oxide fine particles.

The rejection over <u>Konya</u> (US 2003/0044706) combining with <u>Yamashita</u>, <u>Ishiyama</u> and <u>Kuramoto</u> is traversed.

<u>Konya</u> (US 2003/0044706), <u>Yamashita</u>, <u>Ishiyama</u> and <u>Kuramoto</u>, alone or in combination, disclose or suggest that **a standard deviation σ of a particle size distribution of the primary particle diameter satisfies a relation of: $R/4 \leq \sigma \leq R$.**

Applicants previously filed **a Rule 132 Declaration** showing that Konya does not satisfy the requirement of the present invention. Notably, the **relation of: R/4 ≤ σ ≤ R** (as claimed in the independent claims) is not satisfied in Konya.

Further, the particle size distribution of the present invention is from that of Konya et al. as explained below.

Below is a detailed explanation of the method for obtaining an average particle diameter and the standard deviation:

It is known that particle size distribution of powders and the like can be generally approximated by Gaussian function (Fig. 1).

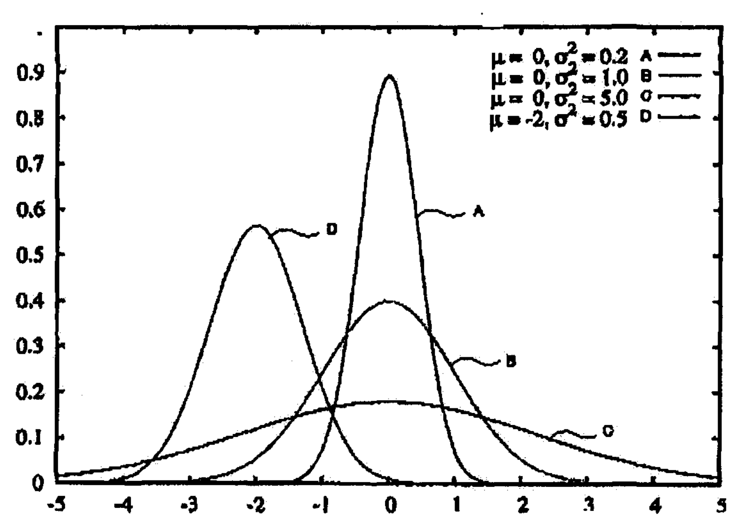

Fig. 1 An example of Gaussian distribution (probability density function). In this case, the probability density function is expressed by Equation (1).

$$f(x) = \frac{1}{\sqrt{2\pi}\sigma} \exp\left(-\frac{(x-\mu)^2}{2\sigma^2}\right) \qquad \text{Equation (1)}$$

where μ represents an average, and a represents a distribution (standard deviation).

The particle size distribution of Example 6 of Konya et al. is 40 nm to 180 nm (0.04 μm to 0.18 μm). Generally, the center of a particle size distribution can be considered as an average particle diameter, therefore, the average particle diameter of Konya et al. is found to be (0.04+0.18)/2 = 0.11μm. Then, Gaussian distribution having an average particle diameter (μ) of 0.11μm and a specific distribution (standard deviation) is simulated: when the values of f(x) corresponding to the particle size (x) of 0.04 μm and 0.18 μm are appropriately small values (0.005), the value of σ is 0.017. This is as shown in the graph in Fig. 2.

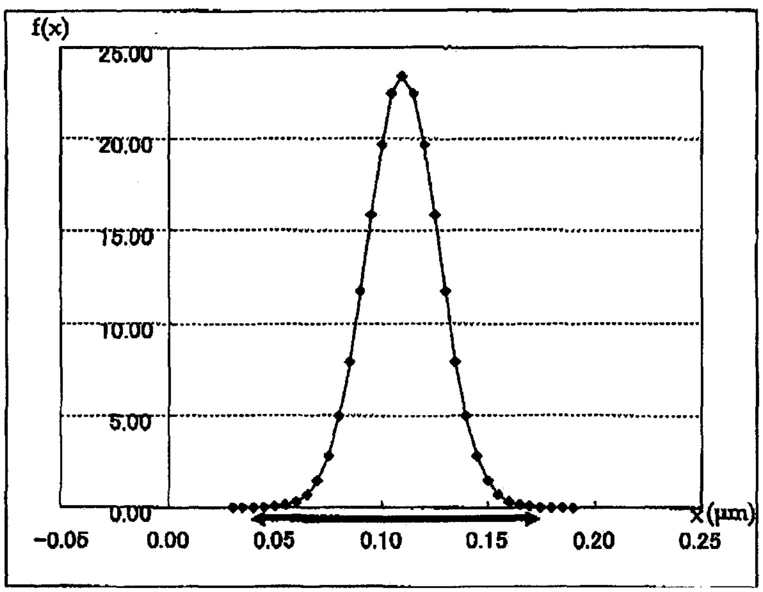

Fig. 2 The result of the simulated particle size distribution of Konya et al. (0.04 μm to 0.18 μm).

From the above calculation, the particle size distribution of 0.04 μm to 0.18 μm as shown in Fig. 2 is reasonably understood.

On the other hand, the wider the particle size distribution becomes, the larger the value of σ becomes. For example, when the particle size distribution of the present

application, which satisfies the range of $R/4 \leq \sigma \leq R$, is the sharpest, $R/4 = \sigma$ (0.11/4=0.0275) and $\sigma = 0.0275$. This particle size distribution is shown in Fig. 3, and the range of the particle size distribution is not 0.04 μm to 0.18 μm, but found to be 0.00 μm to 0. 22μm. When the value of σ is more than the above range, the particle size distribution becomes broad, and does not fall within the range of the particle size distribution of Konya et al.

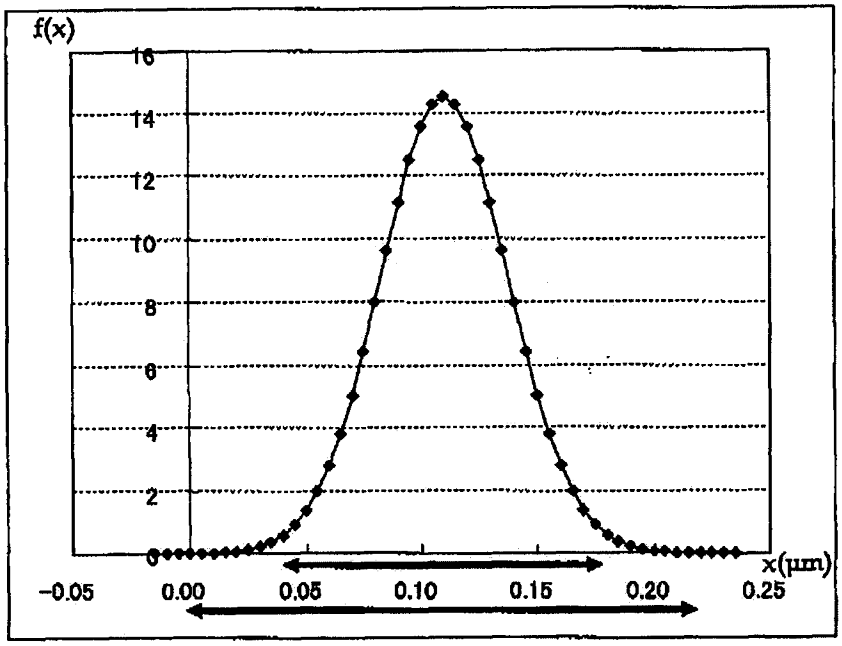

Fig. 3 A particle size distribution of the present application (0.00μm to 0.22μm).

Therefore, the particle size distribution of the present application differs from that of Example 6 of Konya et al.

Yamashita, Ishiyama and Kuramoto do not cure the defects of Konya (US 2003/0044706).

Thus, the rejection over Konya (US 2003/0044706) combining with Yamashita, Ishiyama and Kuramoto should be withdrawn.

Finally, Applicants note that MPEP §821.04 states, "if applicant elects claims directed to the product, and a product claim is subsequently found allowable, withdrawn process claims which depend from or otherwise include all the limitations of the allowable product claim will be rejoined." Applicants respectfully submit that should the elected group be found allowable, the non-elected claims should be rejoined.

This application presents allowable subject matter, and the Examiner is kindly requested to pass it to issue. Should the Examiner have any questions regarding the claims or otherwise wish to discuss this case, he is kindly invited to contact Applicants' below-signed representative, who would be happy to provide any assistance deemed necessary in speeding this application to allowance.

Respectfully submitted,

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